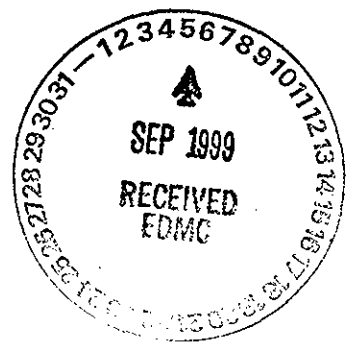
0051625

Department of Energy
Office of River Protection
P.O. Box 550
Richland, Washington 99352

99-TSD-087

SEP 24 1999

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504



Mr. Douglas R. Sherwood
Hanford Project Manager
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 88352

Addressees:

COMPLETION OF HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) MILESTONE M-40-12, "RESOLVE NUCLEAR CRITICALITY SAFETY ISSUE"

This letter provides notification of the resolution of the Hanford Waste Tank Nuclear Criticality Safety Issue as identified in Tri-Party Agreement Milestone M-40-12, "Resolve Nuclear Criticality Safety Issue," by September 30, 1999:

> "Resolve the potential for Nuclear Criticality Safety Issue by providing sufficient monitoring, analyses, and revision of appropriate safety documentation. These activities must address the various stages of waste transference and the possibility for changes in the potential for nuclear criticality incidents during waste transfers."

A copy of the U.S. Department of Energy (DOE), Headquarters Memorandum from C. L. Huntoon to R. T. French, DOE Office of River Protection, "Approval to Resolve Nuclear Criticality Safety Issue," dated September 21, 1999, is attached.

A nuclear criticality technical basis report was developed in 1996 in support of the Basis for Interim Operation (BIO). The technical report concluded that under current plutonium inventories and operating conditions, a nuclear criticality accident is incredible in any of the Hanford Site single-shell tanks, double-shell tanks, or double-contained receiver tanks. In 1996 an independent DOE Richland Operations Office review team reviewed and approved the technical basis report in support of the BIO and recommended resolution of the technical portion of the Nuclear Criticality Safety Issue.

Management assessments of the Lockheed Martin Hanford Corporation (LMHC) Nuclear Criticality Safety Program were recently completed by both the Project Hanford Management Contract team and the DOE Office of River Protection (ORP) to support resolution of the administrative portion of the Nuclear Criticality Safety Issue. The assessments found that a viable, formal program is in place which meets all identified requirements. In addition, the assessments identified that the program is under continuous improvement, based on effective identification of lessons-learned, and has the capability to effectively manage issues and concerns in a timely manner.

In summary, the waste form in the Hanford Site high-level waste tanks is subcritical under current plutonium inventories and operating conditions and therefore, a nuclear criticality accident is not credible. Effective administrative controls are in place to ensure that the waste form remains subcritical under storage conditions as well as future tank farm operations. The LMHC Nuclear Criticality Safety Program and management system are in place to ensure that controls are effectively implemented and Nuclear Criticality Safety Issues are adequately addressed. Therefore, the Tank Farms Nuclear Criticality Safety Issue has been resolved to meet Tri-Party Agreement Milestone M-40-12.

If you have any questions, please contact me on (509) 376-6888, or Jackson Kinzer, Assistant Manager for Tank Waste Storage and Retrieval, ORP, on (509) 376-7591.

Sincerely,

George, H. Sanders, Administrator
Hanford Tri-Party Agreement

TSD:DHI

Attachment

cc w/attach: See page 3

cc w/attach:
J. R. Wilkinson, CTUIR
S. L. Dahl, Ecology
R. F. Stanley, Ecology
A. Valero, Ecology
D. R. Sherwood, EPA
J. S. Hertzel, FDH
TPA Administrative Record, FDH
D. J. Washenfelder, FDH
M. Reeves, HAB
R. J. Cash, LMHC
D. R. Bratzel, LMHC
P. Sobotta, NPT
M. L. Blazek, OOE
R. Jim, YIN

DOE F 1325.8
(8-89)
EFG (07-90)

United States Government Department of Energy

memorandum

DATE: September 21, 1999

REPLY TO ATTN OF: EM-38

SUBJECT: Approval to Resolve Nuclear Criticality Safety Issue

TO: R. French, Manager, Office of River Protection

Your memorandum dated July 2, 1999, to the Acting Assistant Secretary for Environmental Management requested approval to close the Hanford Tank Farms Nuclear Criticality Safety Issue. Your request is approved.

My staff has carefully reviewed the technical rationale for closing this safety issue, and we concur with your conclusion that, under current plutonium inventories and operating limits, a nuclear criticality accident is incredible in any of the Hanford Site single-shell tanks, double-shell tanks or double-contained receiver tanks during waste storage. We also agree, based upon the management audits that were performed, that there is a viable, formal nuclear criticality safety program in place that meets all the identified requirements for such a program. A sound criticality safety program is essential for assuring that all operations comply with the operational limits that are necessary for criticality safety.

I commend you and your staff and the contractor for your diligent efforts in resolving this complex and technically challenging issue. It is gratifying to see the progress you are making in eliminating the urgent risks at Hanford.

Carolyn L. Huntoon

Carolyn L. Huntoon
Assistant Secretary for
Environmental Management

cc:
K. Klein, Manager, RL